

„Broadband in the 21st century“
CEPS, Brussels,
May 26th, 2009



Broadband cooking recipe

A pragmatic approach to the implementation of a
successful broadband development strategy for rural areas

Dr. Martin Fornefeld
Gilles Delaunay

micus
Management Consulting GmbH

Stadttor 1	D – 40219 Düsseldorf
Albertstr. 12	D – 10827 Berlin
phone	+49 (0)211 – 3003 420
fax	+49 (0)211 – 3003 200
www.micus.de	info@micus.de

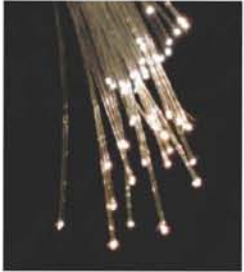
MICUS

Market research,
strategy development
at a higher level

KONEXT

Project management,
infrastructure development
with local communities

Fiber optics is THE broadband technology



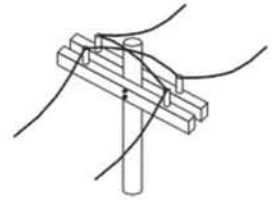
Fiber optics:

- Virtually unlimited transmission capacity
- Virtually unlimited transmission distance
- Virtually unlimited lifetime
- Virtually unlimited availability



Radio technologies:

- Limited capacity (radio frequency spectrum)
- Limited reach (obstacles)
- „Light“ infrastructure
- mobile internet: interesting market as a complement to broadband



Copper cables:

- Limited [capacity x distance] product
- Expensive raw materials
- Interference and interception issues
- The infrastructure already exists



Backbone: long-distance,
high-capacity infrastructure

Access network: radio,
copper cables or optical fiber

**An easy-to-use indicator for measuring broadband development:
the distance between the end-user and the nearest optical fiber**

Market regulation	Public Financing	Technical support	Infrastructure Planning	Demand stimulation
----------------------	---------------------	----------------------	----------------------------	-----------------------

EU

Federal state

Higher regional
level (states)

Lower regional
level

Local
communities

Find the right decision level for the right job.

„Enable the private market, not replace it.“

Within settlement areas:
high market density

Long distances between
villages: no private investor.

Backbone infrastructure:

- High costs compared to investments in urban areas.
- Competition at the infrastructure level is not possible in rural areas.

Solution: public financing (partially) and leasing model „fair access“.

Demand layer:

- Qualified broadband demand
- Quantitative market analysis
(business/ private)

Coverage layer:

- Broadband coverage
- Available bandwidth/ quality

Infrastructure layer:

- Telecommunications
infrastructures
- Other relevant infrastructures

Development layer:

- Draft planning
- Planned upgrades

Make it Web 2.0!

- A. Demand analysis:** evaluate the market size and the economic detriment for not-connected companies.
- B. Analysis of the existing infrastructure:** figure out the current broadband coverage and other relevant infrastructures for broadband development.
- C. Draft infrastructure planning:** draw the lines of an efficient development strategy.
- D. Negotiations with the telecommunications operators:** negotiate the contribution of the private market to the development of the infrastructure.
- E. Analysis of the economic opportunity:** compare investment costs, return on investment and risk factors over the next 15 to 20 years.
- F. Project financing:** bring together public and private financing.
- G. Business model (optional):** in case the private market is not able to propose solutions, create a business of public initiative.

All these points are essential!

The development of the broadband infrastructure is a continuous process



ADSL >> „**Fiber-to-the-Village**“ >> „**Fiber-to-the-Home**“
Shape the present, prepare the future.

Better infrastructures should generate higher revenues.

**A bad example
in Germany:**

104kbit/s	384kbit/s to 16000kbit/s	100Mbit/s
70€/month (average)	35€/month (market price)	35€/month (in Cologne)

Which investor would be so fool to upgrade the ISDN infrastructure in rural areas?

**A good example
in Germany:**

Fiber optics local loop (OPAL)	13.25€	16.27€
Copper local loop	10.50€	10.20€

Do not let private actors decouple access prices and connection quality.

Building a state-of-the-art broadband infrastructure is not the point.
Having people use broadband is the real objective.

Two main targets:

- small businesses
- elementary schools



Other targets:

- elderly people
- low education social groups



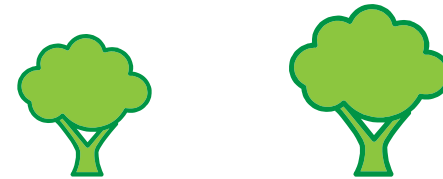
The three golden rules for an efficient demand stimulation:

- Users train users (no „teachers“)
- Do not explain; just demonstrate
- Try it yourself and learn by yourself



How will you address the structural issues on the long term?

A long-term structural digital divide between urban und rural areas.



How will you finance the long-term development of the telecommunications infrastructure in rural areas?

Possible strategies:

- Spend taxpayers' money to develop broadband infrastructures in rural areas.
- Introduce costs redistribution mechanisms between private operators on the basis of the regional distribution of their respective customer base.
- „Free market“: People in rural areas should pay the full price! Put an end to the nationally unified prices.



Tank you for your attention

Dr. Martin Fornefeld

+49 211-3003 420

fornefeld@micus.de

MICUS Management Consulting GmbH

www.micus.de